

Forward Deployed Naval Forces (FDNF) Rota Ship Maintenance

Technical Overview

CDR Joe Saegert, USN

November 2012

- Background / Overview
- Availability Planning
- Availability Execution
- Availability Completion
- Special Qualifications / Requirements

- Forward Deployed Naval Force (FDNF) in Rota
 - Comprised of four (4) DDG-51 class ships
 - Two ships will arrive in FY 2014
 - Two ships will arrive in FY 2015
- Ships will require maintenance and repairs

- Operational Cycle
 - 4 month patrol, 4 month upkeep
- Contractor shall plan and execute maintenance
 - Continuous Maintenance Availability (CMAV)
 - 35 day CMAV between patrols
 - Selected Restricted Availability
 - 100 day SRA every 24 months per ship
 - Only one CNO availability at a time
 - CM and EM (as schedule permits)

Process

**Plannin
g**

**Executio
n**

**Comple
tion**

- First availability for each ship:
 - Work packages may be provided by the Government
- Complete work package and material will be provided
 - Contractor to provide a labor price proposal
 - Contractor to develop an integrated work schedule
- Contractor will conduct planning functions for future availabilities

- Availability Planning
 - Work Identification
 - Identification of Long Lead Time Material (LLTM)
 - Specification Development
 - Work Package
 - Test and Inspection Plan (009-04, 009-60)
 - Integrated Test Plan (009-67)
 - PCP / EPCP Development (009-09)
 - Integrated Production Schedule (009-60)

Work Item Example

SHIP: USS ARLEIGH BURKE (DDG-51) ITEM NO: 150-11-002
COAR: 16-609 PCN: ES01-WA1V
CMP: NONE
PLANNER:

1. SCOPE:

- 1.1 Title: Bulkhead Stiffener; repair
- 1.2 Location of Work:
 - 1.2.1 Deck Gear Locker (01-240-1-A)
- 1.3 Identification:
 - 1.3.1 Not Applicable

2. REFERENCES:

- 2.1 Standard Items
- 2.2 150-6218967 Rev V, Unit Structural Arr Dwg-Assy Unit 4510

3. REQUIREMENTS:

3.1 Accomplished repairs to existing deteriorated T-Bar stiffener located in 1.2, as directed by the SUPERVISOR, using 2.2 for guidance.

3.1.1 Locate and identify the extent of the damage. Crop out and replace up to One foot of T-Bar stiffener and one 12 inch by 15 inch plate insert for the bulkhead as directed by the SUPERVISOR.

3.1.2 Chip and grind surfaces flush in way of repairs.

3.1.3 Accomplish the requirements of 009-12 of 2.1, including Table 2, Column A, Lines One through 7.

3.1.4 DELETED

3.2 Accomplish the requirements of 009-32 of 2.1 for new and disturbed surfaces.

4. NOTES:

SHIP: USS ARLEIGH BURKE (DDG-51)

4.1 Original s.

4.2 This work item has no associated tanks/voids requiring Gas Free Services.

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 LLTM:

1. None.

5.2 PUSH MATERIAL:

1. None.

5.3 KITTED MATERIAL:

1. None.

Standard Item 009-12

TABLE 2
WELDING, FABRICATION, AND INSPECTION OF SURFACE SHIP HULLS (COMBATANT)

L I N E	COLUMN	A	B	C	D	E	F
	MATERIAL EVOLUTION	CARBON STEEL (MS) AND (HTS)	*HIGH STRENGTH STEEL (HY-80/100, HSLA-80 AND STS)	ALUMINUM ALLOY	CHROMIUM NICKEL STEEL (STAINLESS)	COPPER AND/OR NICKEL BASE ALLOYS	SILICONE BRONZE ALUMINUM BRONZE
1	WELDER QUALIFICATION	S9074-AQ-GIB-010/248, PARAGRAPH 5					
2	WELDING PROCEDURE	S9074-AQ-GIB-010/248, PARAGRAPH 4					
3	ELECTRODE	MIL-STD-1689, PARAGRAPH 10 TABLE X	MIL-STD-1689, PARAGRAPH 10 TABLE XI	MIL-STD-1689, PARAGRAPH 10 TABLE XVI	MI-STD-1689, PARAGRAPH 10 TABLES XII AND XIII	MIL-STD-1689, PARAGRAPH 10 TABLES XIV AND XV	S9074-AR-GIB- 010/278, TABLE II
4	JOINT DESIGN	MIL-STD-22 MIL-STD-1689, PARAGRAPH 11					
5	WELDING REQUIREMENTS	MIL-STD-1689, PARAGRAPH 13					
6	WORKMANSHIP REQUIREMENTS	MIL-STD-1689, PARAGRAPHS 12 AND 14					
7	VISUAL	MIL-STD-1689, PARAGRAPHS 6, 7, AND 8 MIL-STD-2035, PARAGRAPH 4 T9074-AS-GIB-010/271, PARAGRAPH 8					
8	RADIOGRAPHIC INSPECTION (RT)	MIL-STD-1689, PARAGRAPHS 6, 7, AND 8 MIL-STD-2035, PARAGRAPH 5 T9074-AS-GIB-010/271, PARAGRAPH 3					

Test & Inspection Plan

Job No.: Job #		Contract No.: XXXXXXXXXX					
Hull No.: XXX		Item No.: 123-12-123					
Ship Name: USS XXXX		Title: Well Deck Catwalk Non-Skid; Replace					
Paragraph	Item(s) Being Inspected:	Test / Inspection	Acceptance Criteria	Results	Inspection Date & Ticket #	NSSA Person Notified, Date, Time	Name of Person on Check Point Ticket (Contractor)
3.2.3 SI-009-06	(Port) Well Deck Catwalk	(V) Visually Inspect the Integrity of the Containment	Protective Measures in Place Prior to Contamination Producing Operations	sat	3/11/15 6:00	Jerry 3-12-15 12:00	John D.
3.10.1 SI-009-32	(Port) Well Deck Catwalk	(V) Environmental Readings	Surface Temp- 50 to 120, Ambient Temp- 55-100, Relative Humidity- 0-85, Dew Point: 5 Deg. <Surface Temp or Lower	sat	3/11/15 6:00	Jerry 3-12-15 12:00	Bill S.
3.10.2 SI-009-32	(Port) Well Deck Catwalk	(I) (G) Cleanliness	SP-1: Prior to Surface Prep: Free of contaminants such as sea salts, rust, dust, mud, marine growth, grease, oil, other petroleum products.	sat	3/11/15 8:00	Jerry 3-12-15 12:00	John S.
3.10.1 SI-009-32	(Port) Well Deck Catwalk	(V) Environmental Readings (Every 12 HRS)	Surface Temp- 50-120, Ambient Temp- 55-100, Relative Humidity- 0-85, Dew Point: 5 Deg. <Surface Temp or Lower	sat	3/11/15 18:00	Jerry 3-12-15 12:00	Bob S.
3.11.3 SI-009-32	(Port) Well Deck Catwalk	(I) (G) Surface Profile	3-4.5 mils	sat	3/11/15 18:15	Jerry 3-12-15 12:00	Bob S.

Planning Milestones

Task / Milestone	Responsible Activity	Due
Establish Availability in NMD	Government	A-360
50% of maintenance work package 2K's locked based on \$ budget	Government	A-240
Attend Integrated Planning Conference	Government	A-240
Contractor complete planning and estimating of work on 50% of the proposed 2K total required by the above A-240 milestone.	Contractor	A-190
80% of maintenance work package 2K's locked based on funding.	Government	A-151
Contractor complete planning and estimating of work on 80% of the proposed 2K total required by the above A-151 milestone	Contractor	A-126
Conduct Work Package Integration Conference (WPIC)	Government	A-120
100% of maintenance work package 2K's locked based on funding	Government	A-92

Planning Milestones

Task / Milestone	Responsible Activity	Due
100% of maintenance work package 2K's planned, estimated	Contractor	A-85
Perform risk assessments and verify deliverables to Contractor	Government/ Contractor	A-85
Contractor "publish" package in NMD	Contractor	A-85
Contractor submit final package cost proposal	Contractor	A-71
Complete final negotiations of the work package for the availability.	Government	A-58
Definitize Work Packages	Government	A-35
Conduct Work Package Execution Review (WPER) - finalize funding	Government/ Contractor	A-30
Start Date of Availability	Government	A-0
End Date of Availability	Government	C-0

Process

**Plannin
g**

**Executio
n**

**Comple
tion**

- Contractor Submitted Reports
 - Condition Found Reports (CFR)
 - Required Reports
- Request for Contract Change (RCC)
- Production Schedule
- Progress Reporting
- Checkpoints (Test & Inspection Plan)

Execution Milestones	Due
Start / PIERSIDE A+0	A+0
Production Completion Date (PCD)	A+73
Conduct Light Off Assessment (LOA) / AEGIS Light Off (ALO)	A+87
Dock Trial/Fast Cruise	A+93
Commence Sea Trial	A+96
Complete Sea Trial	A+98
Avail Complete	A+100

**Approximately 70 days to complete
work**

Process

**Plannin
g**

**Executio
n**

**Comple
tion**

Workflow

Work Brokering

All availability work items properly brokered?

Work Item Technical Adequacy

Have all work and test items been technically reviewed and tied to Certifiable Key Events?

Work Completion

Have all work items been completed IAW applicable requirements and specifications and documented?

New/Growth Work

Have all Condition Found Reports been received, technically reviewed, correctly tied to Key Events?

Testing

Has all Integrated Test Plan (ITP) testing been satisfactorily completed and WAFs closed to support Key Events?

Departures From Specification

Have all non-conformances been properly adjudicated?

Final Certification

Are all work and test items complete?

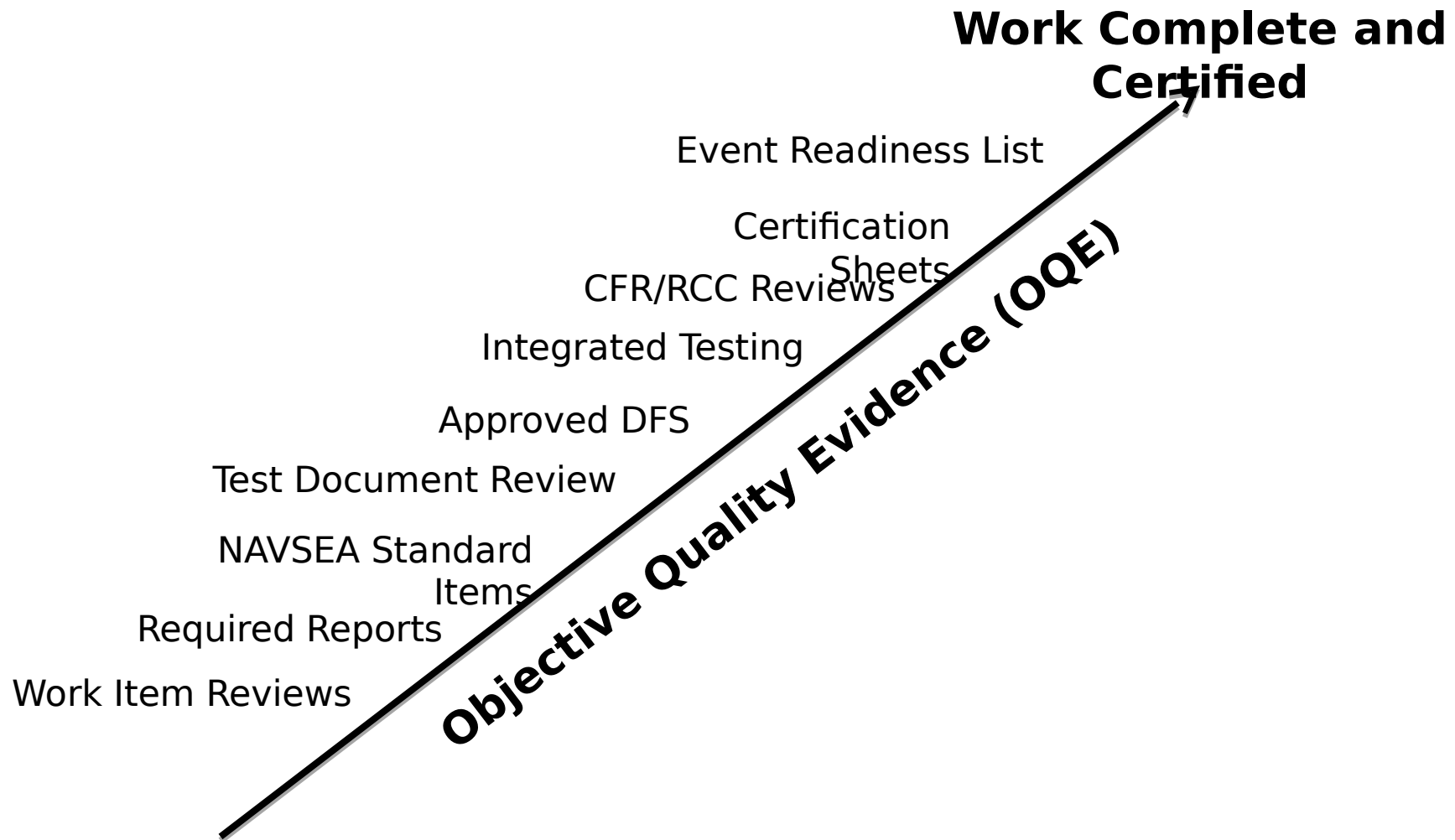
Quality Assurance

Are all Quality Assurance deficiencies completed or if outstanding, are corrective actions at a level to support each Key Event?

- Achieve technical rigor and discipline in the planning and execution of maintenance avails
- Implement standard process for management of work
- Ensure work accomplished in accordance with correct technical specifications
 - Departure From Specification (DFS)
- Ensure work complete and supported by Objective Quality Evidence (OQE)

**Certify that work is technically correct
and completed per applicable
specification**

Certification Process



- Navy Maintenance Database (NMD)
- Quality Management System
- Work Authorization Form (WAF) (009-24)
 - Tagout
- Coatings / Critical Areas (009-32)
- Welder Qualifications (009-12)
 - Non-Destructive Testing
- Process Control Procedure (PCP) (009-09)
- Expanded PCP (EPCP)

- Quality Management System (QMS)
 - Described in NSI 009-04
 - Compliance with ISO-9001 standards
 - Additional documented processes
 - Management Responsibilities
 - Customer Related Processes
 - Purchasing
 - Production and Service Provision
 - Monitoring and Measurement of Product
- The Navy will monitor the effectiveness of the contractor's Quality system.

The contractor is responsible for controlling product quality, offering for acceptance only those products and services that conform to contract specifications, with supporting evidence.

- A Process Control Procedure will be required to support work execution for some items
- Oversight/protective measures in place to ensure quality management of work and procedures
- Developed by the contractor and submitted for approval

- Main Reduction Gear (MRG) & MRG Lube Oil Systems
- MRG Couplings/Clutches
- Propulsion Shafting & Shaft Bearing Systems
- Main Propulsion Turbine Lube Oil Systems
- Main Propulsion Fuel Oil Systems
- Ship's Service Generator Fuel Oil Systems

Goal is the ability to certify work is complete

Summary

- Background / Overview
- Availability Planning
- Availability Execution
- Availability Completion
- Special Qualifications / Requirements

QUESTIONS? ¿PREGUNTAS?

Acronyms

AC: Availability Completion
AIT: Alteration Installation Team
ALO: AEGIS Light Off
AWC: Availability Work Certification
AWP: Availability Work Package
C/S: Combat System
CAQAP: Contract Administration Quality Assurance Program
CFM: Contractor Furnished Material
CFR: Condition Found Report
CHENG: Chief Engineer
CWP: Controlled Work Package
DT: Dock Trials
EPCP: Expanded Process Control Procedure
ERL: Event Readiness List
FC: Fast cruise
GFM: Government Furnished Material
IAW: In Accordance With
ITP: Integrated Test Plan
JFMM: Joint Fleet Maintenance Manual
KE: Key Events
LOA: Light Off Assessment
LMA: Lead Maintenance Activity

MS: Milestone(s)
NSA: Naval Supervisory Activity
NSI: NAVSEA Standard Items
NSSA: Norfolk Ship Support Activity
OQE: Objective Quality Evidence
OSIC: On Site Installation Coordinators
PCD: Production Completion Date
QA: Quality Assurance
QMP: Quality Management Plan
QMS: Quality Management System
RCC: Request for Contract Change
RFP: Request for Proposal
RMC: Regional Maintenance Center
RTS: Readiness to Start (Reviews)
SI: Standard Item(s)
SRA: Selected Restricted Availabilities
SSRAC: Standard Specification for Ship Repair and Alteration Program
ST: Sea Trials
TWH: Technical Warrant Holder
WAF: Work Authorization Form